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ABSTRACT

This study evaluates global education at the secondary school level covering several regions of the United States and including programs which use contrasting educational approaches and conceptualizations. The programs represent a wide range of positions including the following: the period of time the program has been functioning, the extent of teacher training, the specific content areas of courses, and the use of extracurricular activities to supplement classroom-based activities. The survey instrument relied on school districts to administer surveys. Although random assignment and control over the experimental conditions were not possible, the study is unique for the breadth of the group responding. The size of the sample and the breadth of the questionnaire allow an assessment of predictors of both cognitive and attitudinal outcomes. The results of the survey suggest that some programs falling under the general categories of global education do make a positive contribution to the global awareness and concern of secondary school students. The effective programs appear to be those which have been established for several years, those which combine curriculum with extracurricular activities, and those which have stressed teacher training. Although this survey provides strong evidence that global education does work, its interpretation also suggests that simply creating a course and calling it international relations or world studies will not ensure the desired outcome. (RSL)

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Predictors of Global Awareness and Concern Among Secondary School Students

By Judith Torney-Purta

Professor of Human Development
University of Maryland at College Park

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MERSHON AWARD FOR GLOBAL EDUCATION RESEARCH

Predictors of Global Awareness and Concern Among Secondary School Students

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There has been substantial interest for more than a decade in formulating conceptualizations of global education and in implementing programs which exemplify those conceptualizations. However, there is still little research concerning the development of knowledge and attitudes in this area and little evaluation of the effect (if any) which global education programs have. Some researchers have pointed to general deficiencies in knowledge and concern about international issues among U.S. secondary students in comparison to those in other nations (Torney, 1977) and to specific deficiencies among elementary school students in the U.S. (Pike & Barrows, 1979). Mitsakos (1978) investigated the effects of a curriculum entitled The Family of Man, including comparisons of third grade students who had used that course of study with others who had either used a different curriculum or had not had social studies instruction.

A large-scale project to assess the global awareness of college students was undertaken by the Educational Testing Service in cooperation with the Council on Learning in the late 1970's. In that study, approximately 3000 students were tested on a lengthy instrument including both cognitive and attitudinal sections, as well as a

self-assessment of foreign language competency. (See Barrows, 1981 for a report of the basic data from that project.) Subsequent regression analysis of those data indicated that the following were important predictors of knowledge of world problems among college students: SAT or ACT score, sex (with males scoring higher than females), student major (with history and social science majors scoring the highest and education and agricultural/vocational majors the lowest), frequency with which the newspaper is read and the reading of international news, having visited another country, and having taken courses in history or geography (Torney-Purta, 1982). Predictors of an additional measure of global concern or empathy with those from other cultures included reading international news and the number of foreign language courses the student had taken.

The current study* was designed to evaluate global education at the secondary school level covering several regions of the U.S. and including programs which used contrasting educational approaches and conceptualizations. These programs represented a wide range of positions along dimensions such as the following: the period of time the program had been functioning, the extent of teacher training, the specific content areas of courses, and the use of extra-curricular activities to supplement classroom-based activities. The categorizations of programs were based on brief descriptions

* The original data collection for this study was supported by a grant from U.S. Department of Education, International Research and Studies Program. Support for the analysis was also obtained from the Semester Award program of the Graduate College and from the Computer Center at the University of Maryland.

provided by project personnel, but no detailed material about these programs' characteristics was available; this survey was undertaken within severe constraints of funding, relying on cooperation from school districts to administer the surveys. Although random assignment and control over the experimental conditions were not possible, this study is unique at the secondary level for the breadth of the group responding and for the opportunity to compare students who had participated in global education programs with students from the same schools who had not had this experience. Further, the size of the sample and the breadth of the questionnaire allow an assessment of predictors of both cognitive and attitudinal outcomes which are important to many global education programs.

Instrument

The paucity of previous evaluation and research in global education may be blamed in part on the lack of suitable instruments and the large investment of resources required to develop reliable measures of knowledge and attitudes. It was possible in this project to modify an existing instrument. The Global Awareness Survey had been developed by the staff of the Educational Testing Service in consultation with an Assessment Committee consisting of specialists in fields such as international economics, world geography, history, and international relations; it required about 2 hours for college students to complete. In order to use this instrument with secondary school students, it was necessary to choose the somewhat easier items to make it suitable for administration in no more than an hour.

The 101-item cognitive part of the test was shortened to 28 items (in general by choosing items which had been answered correctly by at least 30% of the college freshmen; items which did not require reproducing extensive graphs or maps; items which had shown reasonable item-total correlations; and items which covered less specialized topics). Five items which had first been included in a study of elementary and secondary school students entitled Other Nations Other Peoples, and which had been repeated in the college instrument, were also included. Each item stem was followed by four alternative choices (the same format used in the college student survey). The reliability coefficient for the 101-item college student test was .84 for freshmen. The alpha coefficient for the 28-item version used in this study was .70 for the secondary school sample. The score based on this cognitive test is hereafter referred to as the Global Awareness measure.

A ten-item scale measuring concern for world problems and interest in people from other cultures (e.g., I make an effort to meet people from other cultures--True or False; When I hear that thousands of people are starving in Cambodia, I feel very frustrated) was included from the college test without revision and is referred to as the Global Concern measure. Seven items from the college student survey were included to assess perceived competence in speaking and understanding the foreign language in which the student felt most competent. It was intended that these be used as potential predictors of cognitive and attitudinal aspects of global awareness and concern. Demographic information similar to that collected on the college sample was also obtained, as well as

information specific to high school students (e.g., enrollment in courses with international content commonly offered in high school; involvement with exchange programs commonly found at the high school level; plans for further education after high school).

Selection of the Sample and Procedure

Sites for administration of the student surveys were chosen in the following way. The author made personal contact with educators who were known to have global education programs operating in their districts. In addition, letters were sent in March of 1982 to fourteen principals of International High Schools, to thirty-six coordinators of International Baccalaureate Schools, and to a number of UNESCO Associated Schools Project Coordinators. A list of schools where federally funded 603 projects had been conducted was obtained, and several school coordinators were contacted. Each individual was asked whether he or she would agree to administer the surveys and whether they could obtain both a group which had experienced considerable exposure to global education (through a coordinated program, by taking several courses, or through extra-curricular activities) and also a group of similar grade and general background which might serve as a comparison group (lacking special experience with global education). It was stressed that the test was designed for juniors and seniors in high school and suggested that comparison groups might be drawn from sociology or American history classes which included students of approximately the same ability and background level as those enrolled in global education classes. Each survey was accompanied by a set of student

instructions; each cooperating teacher received a set of teacher instructions.

The testing of a global group and a comparison group turned out to be feasible in sixteen schools (from a smaller number of programs). It was not possible to obtain an appropriate comparison group in several schools, however. Seven schools (including an international high school and all the International Baccalaureate schools) tested only students with global education experiences.

An attempt was made to secure respondents from several regions of the country. Students from the following states participated: California, Connecticut, Kentucky, Illinois, Indiana, Michigan, Minnesota, New York, and Wisconsin.

Demographic and Academic Characteristics of the Groups Analyzed

The sample may be divided into three groups: First, students in global education programs from schools where it was possible to obtain a comparison group (hereafter referred to as the Global Group); students in the comparison group from these same schools (hereafter referred to as the Comparison Group); and students from special schools or programs with a global component where it was not possible to obtain a comparison group (Special Global Group).

Within the Special Global Group there are three subgroups:

-- 65 students were tested in an international high school established recently in a university community using a curriculum with a concentration on international issues. (International High School)

-- 47 students were tested in a public school in which there is a relatively long-standing program with a global focus within the school. (School-wide Program)

-- 230 students were tested in five different schools offering the International Baccalaureate. Four were public and one a private school. (International Baccalaureate)

Within the Global Group (and the associated Comparison Groups selected from the same schools) there are five subgroups:

-- 33 students were tested in a public high school with a program focussed on extra-curricular activities including a model UN and a strong international relations club. 33 students in a comparison group which did not participate in this club or these special activities were also tested. (Extra-Curricular)

-- 138 students were tested in five different schools or school districts which had participated in some part of the federally funded 603 projects. The type of curriculum and participation was quite variable in these school. In some there had been extensive teacher training and efforts to infuse global material into the curriculum. In others the experience had been more limited, focussing on participation over several weeks in a specially designed simulation. Most of these programs had been in existence for a relatively short period of time. A comparison group of 132 was tested in these schools, with approximately the same number in the comparison group in each school as had been tested in the global group. (603 Programs)

-- 82 students were tested in two school districts which were attempting to increase the number of international courses offered (and taken by students) but which took a relatively traditional approach to global education using courses such as world history. 85 students from these same schools formed the comparison group. (Traditional)

-- 170 students were tested from six different school districts in a single state which had participated in identifying existing curriculum materials, generating new units and community resources, and teacher training -- coordinated on a state-wide basis. 149 students from these same schools (and in proportional numbers) formed the comparison group. (State-wide)

-- 112 students were tested from two different school districts which had participated in a program organized on an area-wide basis; the program had been in existence for more than five years. The identification and circulation of curriculum materials, extensive work on teacher training, and attention to team building among teachers characterized this program. 113 students from these same schools formed the comparison group. (Area-wide)

In summary, as in many evaluations, it was impossible to have a perfectly balanced design. However, the students do come from three major regions of the U.S., and the comparison groups within schools appear to have been carefully chosen. Several contrasting models are included. Some of the programs have been in existence for a relatively long period; in others students have experienced

only about a year of global education as part of a short-term special project. Grouping into the categories listed above was done on the basis of rather brief program descriptions and therefore has some weaknesses. In particular, the 603 project group is quite diverse. Included here were all the projects which had received relatively short-term 603 funding, but they were using very different models. The State-wide and the Area-wide programs had both received 603 grants (along with other sources of support), but they were treated in the analysis as two separate groups because each could be characterized by its own training program and was located in a relatively limited geographical area. Both were long-term efforts.

The majority of schools tested eleventh and twelfth graders as requested. However, the State-Wide Global Group includes 39% ninth graders and 29% tenth graders. The Area-wide Global Group includes 31% tenth graders (without any students that young in the Comparison Group). The Extra- Curricular Global Group is more than half tenth graders, also without any students that young in the Comparison Group. Comparisons between groups and subgroups were therefore made holding school grade constant. Other demographic variables such as proportion of males and females were similar between groups.

There were relatively large proportions of students with high grades and college-bound students in the Special Global Groups and in some of the Global Groups. More than 40% of the International High School, School-wide Special Program, and International Baccalaureate students reported that they had high school GPA's of A or A-. More than 90% of the students in these groups also

reported that they intended to attend a 4-year college following graduation. If one examines each Global Group with its Comparison Group there is a substantial difference in reported GPA only for the Extra-Curricular Program (where 57.6% of the Global Group reported A to A- averages, while only 9.1% of the Comparison Group had such high grades). In fact, in several of the other programs the Comparison group had a higher GPA than the Global group. Planned attendance at a four-year college following graduation showed a pattern similar to grade point average.

In summary, some caution must be exercised in interpreting the results for the three Special Global Groups and for the differences between the Extra-Curricular Global and Comparison Groups. The students who comprised these samples were more highly achieving students in general and more likely to be college preparatory. Although there is certainly a need for programs which attend to the needs for international awareness among these potential leaders, it will be important in the analysis also to look for programs which address the needs of a broader range of students.

The patterns of courses taken by these students corroborate the extent to which resources were available to the students in the Extra-Curricular Global Program, the International High School, the School-wide Program, and the International Baccalaureate Schools. They reported taking a larger mean number of foreign language courses and a larger number of courses with international content. However, there also appear to be substantial other differences between schools in the number of required years of various subjects, in the availability of specific courses, and in the extent to which a

program relies on a specific course. Although World History appears to be the most frequently taken course (by 62% of the sample), it is clear that international content is packaged under a number of different titles. With the exception of the Traditional Global Group, however, the programs all placed reliance on activities other than classroom instruction for enhancing global awareness.

A list of extra-curricular activities was also included, and students were asked in which they had participated. The most popular for the sample as a whole were foreign language clubs (26% of the sample reported participating). Nearly 17% reported having participated in a group in their church or synagogue discussing world problems (such as hunger). Differences between schools in patterns of participation were striking. For example, although only about 9% of the sample as a whole reported participation in international relations clubs, 100% of the Extra-Curricular Global group reported such membership. Students in the Area-Wide Global group also seem to have participated in more extra-curricular activities with an international theme than the other groups had.

In summary, there are a number of differences in the demographic and academic characteristics of students in these programs, in the courses to which they are exposed, and in the activities out of class in which they participate. Although some of these differences are substantial, the only characteristic of these students which will be controlled before the groups are compared is school grade, since in several cases the Global and Comparison groups within a given school or district differ on that factor.

Comparison of Sub-groups on Global Awareness and Global Concern

In choosing criteria for the comparison of groups in this evaluation it was desirable to include both a summary measure of knowledge or cognitive achievement and a summary measure of attitudes or affect. The knowledge measure was the 28-item cognitive test, chosen from the 101-item college student measure. In general the performance of the high school students on these items was quite similar to that of the college freshmen. On twenty-one of the twenty-eight items, the percentage of the total secondary sample giving correct answers varied by no more than five percent from the figures for the college freshman sample. Five items in this survey had been included in both the Other Nations Other Peoples project testing secondary school students about eight years ago and in the ETS College Student Survey. These items were answered correctly by a proportion of the current sample which was very close to the proportion of 12th graders and of college freshmen answering correctly in the two previous studies. The number of items answered correctly on this test of knowledge will be used as the cognitive measure and called Global Awareness. The mean for the total sample of high school students was 12.85, with a standard deviation of 4.42. No score using identical items was available for the college student samples. However, a reconstruction of the mean for college freshmen based on the percentage correct figures for each item gives an estimate of 13.50.

The most obvious candidate for the attitudinal or affective criterion measure in this study was the ten-item score of Global

Concern. A high score on this measure indicates that the individual is interested in personal contact with those from other nations, attempts to be informed about other cultures, and shows a certain empathy with those suffering from problems of world poverty. As in the case of the cognitive items, the distributions of the secondary school group's responses as a whole were quite similar to those of college freshmen. Using the criterion of a difference in percentage responses of 5% or less, 8 out of 10 items were the same. The secondary school mean was 5.41 and the standard deviation 2.28. Barrows (1981) reports a college freshman mean of 6.22 on these items.

The first question to be answered was how the secondary school sub-groups differed in their Global Awareness and Global Concern. In order to do this an analysis of variance was performed, followed by a series of statistical contrasts between pairs of group means. An analysis of variance was to determine whether there was an overall difference between the means of all groups. In this analysis grade in school was held constant, because of the problems of over-representation of grade 9 and 10 students in some of the groups to be compared. The analysis of variance performed on the group means in Table 1 (Global Awareness- Cognitive) and Table 2 (Global Concern) showed highly significant between-group differences (probability less than .0001).

Table 1: Global Awareness

Comparison of Mean Global Awareness (Cognitive) Score
For Global and Comparison Groups
(Grade in School Held Constant)

	Global Group	Comparison Group	Signif.
Extra-Curricular Exper.	16.69 (28)*	11.48 (27)	.0001
Intern'tl High School	16.39 (59)		
Special School-Wide Prog.	15.19 (35)		
Intern'tl Baccalaureate	13.31 (189)		
State-Wide Program	13.23 (154)	12.94 (127)	n.s.
Area-Wide Program	13.20 (90)	11.86 (99)	.03
603 Programs	11.45 (114)	10.63 (122)	n.s.
Traditional Programs	11.35 (65)	12.03 (79)	n.s.

*N/s for each group in parenthesis; overall comparisons highly significant.

Table 2: Global Concern

Comparison of Mean Global Concern (Attitudinal) Scores
For Global and Comparison Groups
(With Grade in School Held Constant)

	Global Group	Comparison Group	Signif.
Extra-Curricular	6.05 (28)*	4.86 (27)	.05
Intern'tl High School	5.98 (59)		
Intern'tl Baccalaureate	5.95 (189)		
Area-Wide Program	5.75 (90)	5.52 (99)	n.s.
Special School-Wide	5.50 (35)		
Traditional Programs	5.48 (65)	4.91 (79)	n.s.
State-Wide Programs	5.36 (154)	5.11 (127)	n.s.
603 Programs	5.00 (114)	5.10 (122)	n.s.

*N's for each group in parenthesis; overall comparisons highly significant.

The next step was to perform specific contrasts between the means of the matched Global and Comparison Groups within program categories. The most highly significant difference in cognitive Global Awareness was between the Extra-Curricular Global and the Extra-Curricular Comparison group. Also significant was the difference between the Area-Wide Global and the Area-Wide Comparison group. The differences between Global and Comparison groups in the State-wide programs and the 603 programs were in the direction of higher scores for the Global Groups but did not reach significance. Within the Traditional Programs the Comparison Group had a higher cognitive Global Awareness score than did the Global Group (though it was a small and not a statistically significant difference). The Special Global groups did well on the cognitive measure, but had no comparison groups with which they could be directly compared.

One should probably attribute some of the differences between the two Extra-Curricular groups to differences in their general academic aptitude. The percentage of students with GPA's of A or A- indicated that the Global Group in that program was much more academically able. It should also be remembered that the high scoring International High School, the International Baccalaureate and the Special School-Wide program enrolled very high percentages of students with A to A- averages. In other words, the four top scoring groups all had very able students in them. Enrolling excellent students in intensive programs combining foreign language, humanities, and social science instruction and concentrating on international issues with supplementary extra-curricular activities is

successful in producing high levels of global awareness. It is also interesting that the students in the State-wide Global and the Area-wide Global groups (which do not have an especially high proportion of A to A- students) do nearly as well on the test as the International Baccalaureate school students (13.23 and 13.20 compared with 13.31). Further, there is a statistically significant difference between the Area-wide Global group and the Area-wide Comparison group. This program appears to transmit global awareness successfully even though it enrolls average students (only about 20% with A averages).

The students in the 603 Global group performed somewhat less well than the groups listed above (mean of 11.45) and not significantly differently from their Comparison group (mean of 10.63). Some of the cells would have been very small if each school or program had been entered separately into the analysis of variance and the contrasts. However, because of the known diversity of this group the means for individual schools were examined separately. In one school there was a substantial difference favoring the Global Group; the other within-school group differences were quite small.

In summary, there are significant overall differences between the performance on a cognitive test of Global Awareness by students in the thirteen groups. The intensive and highly selective programs enrolling able students seem very successful, especially those which combine curricular and extra-curricular activities. The Area-wide Program is the only one of the programs targeted on a broad range of students which shows a significant difference between Global and Comparison group students (though the State-wide program also has

some evidence of success with this range of students). It should be noted that both of these programs have had continuity over a period of several years and have made both teacher training and the combination of curricular and extra-curricular activities part of their implementation. Programs supported by 603 as a whole have some success, but the difference is not significant for the group as a whole. This analysis showed that the Traditional Programs which rely on single courses to impart global awareness have had little effect.

The group differences on the attitudinal measure, Global Concern, were significant but somewhat less substantial (Table 2). The only contrast between Global and Comparison group which was significant was for the Extra-Curricular group. The top three programs were again the Extra-Curricular, the International High School, and the International Baccalaureate Schools. The Area-wide Global program was fourth. In four of the five programs where both Global and Comparison groups were tested the Global group showed greater concern and interest. In summary, these global education programs seem to have some effect on interest in global issues and people from other cultures.

Predictors of Global Awareness

Although the contrast analysis discussed in the previous section gave some clues about the types of programs which were more successful in their influence on Global Awareness and Global Concern, the grouping was not specific enough nor were the programs distinctive enough to draw unambiguous conclusions. Two

regression analyses were conducted to ascertain which variables in the students' background or school experience were predictive of high Global Awareness or Global Concern across the all the groups. [The N's are reduced in these analyses because of missing information in some of the cases.]

The most substantial predictor of the cognitive Global Awareness score was the student's grade point average in high school (Table 3). The second variable suggests some concrete directions for global education programming. Students who reported reading the international news in the newspaper had higher global awareness. This is similar to results from the college sample and suggests the importance of building habits of attention to media which focus on international topics.

Table 3: Predictors of Awareness

Variables Predicting Global Awareness (Cognitive Score)
In Step-Wise Multiple Regression

Variable	Beta	Signif.	Group with High Awareness
GPA	-.284	.0001	Higher GPA
Read intern'tl. news in paper	.183	.0001	Those who read news
Sex	-.174	.0001	Boys
# years social studies	.146	.0001	Those who took more
Visited another country	.096	.001	Those who were abroad
Watch TV news	-.066	.021	Those who watch more

Multiple R = .503 N = 987

Note: Variables which were not significant predictors included years of foreign language, extra-curricular activities, perceived foreign language fluency, reading newspaper daily, discussion of world problems in class, grade in school.

Boys had higher scores than girls. Other significant predictors were taking (or planning to take) social studies for the four years of high school, watching the news on TV, and visiting another country (especially staying a month or longer). The multiple R was .503. A number of other variables entered into the regression did not make a significant contribution--years of foreign language study, extra-curricular activities with an international focus, perceived foreign language fluency, whether the student read the newspaper daily, frequency of informal class discussion of world problems, grade in school.

A separate regression analysis was conducted to determine the contribution of specific courses to a student's global awareness. In this analysis only grade point average was held contrast. Taking International Relations, World Geography or Western Europe made a significant positive contribution to Global Awareness (the first significant at the .0001 level, the second and third at the .02 level). Taking World History made a significant negative contribution ($p = .007$). Taking the following courses made no significant difference in Global Awareness: World Cultures, Latin American Studies, Current Events. The positive contribution of geography courses is similar to the findings in the college sample; it is interesting, however, that the items selected for the secondary test were not as heavily weighted with those including obvious geography content as were those in the college test. World History, the course from this list which is most frequently taken by students, has a significant negative relationship to global awareness. This may be because this course is often taught in a relatively traditional way which does not

deal with current world problems. There is some evidence in favor of courses which take a global perspective rather than an area-centered view. The courses which are not significant predictors include all those which take a non-Western area studies approach, in spite of the fact that the test had a sizeable number of questions dealing with problems in developing areas. Perhaps these courses stress cultural factors (which were not represented on the test). Another possibility is that students fail to generalize from a study of Africa or Asia to more general problems of development in a global context.

Predictors of Global Concern

Global Concern (the attitudinal variable) was predicted by three of the same variables as were significant in the Global Awareness regression: reading international news, watching news on T.V. and GPA (Table 4). The sex difference in this case favored girls. Participating in extra-curricular activities with international content was the second strongest predictor of attitudes. However, it may be that those who are more concerned are more active, rather than the other way around. Perceived foreign language fluency and the number of years foreign language had been taken were also significant predictors. This suggests that there may be previously unappreciated advantages to students' taking foreign language even if they are unable to achieve fluency, since it appears to increase empathy for global problems. The relation of foreign language experience to global concern replicates a result from the college student analysis (Torney-Purta, 1982).

A regression analysis was also undertaken to determine which courses appeared to enhance global concern, controlling for GPA. International Relations and Soviet/Eastern European Studies were significant positive predictors.

Table 4: Predictors of Concern

Variables Predicting Global Concern (Attitudinal Score)
In Step-Wise Multiple Regression

Variable	Beta	Signif.	Group with High Concern
Read intern'tl. news in paper	.259	.0001	Those who read news
Extra-curricular act.	.173	.0001	Those more active
Sex	.148	.0001	Girls
Watch TV news	-.119	.0001	Those who watch more
Foreign lang. fluency	-.092	.0005	More fluent
GPA	-.081	.005	Higher GPA
# years foreign lang.	.087	.004	Those who took more

Multiple R = .471

Note: Variables which were not significant predictors included: grade in school, reading the newspaper daily, years of social studies, discussion of world problems in class, visit to another country.

Conclusions

The results of the survey suggest that some programs falling under the general category of global education do make a positive contribution to the global awareness and concern of secondary school students. The effective programs appear to be those which have been established for several years, those which combine curricular with extra-curricular activities, and those which have stressed

teacher training. Some schools are especially successful with very able students, while others address the needs of a broader range. However, in the absence of detailed on-site observations it was difficult to assess precisely what it was about some of these programs which made them effective.

Some of the variables which predicted global awareness confirmed common sense predictions. Brighter students did better on this test of information than those less bright; the better students were also more globally concerned. It is also reasonable that students who read the international news in the paper and watch the news on television are more knowledgeable about global issues and more concerned. It is hard to know whether such exposure to information makes students more concerned or whether students seek out more information. The importance of reading international news to enhance global awareness should be noted, however, by teachers and curriculum developers. It seems to be an important kind of media attention to encourage. The content of international relations and world geography courses does seem to make a positive contribution to both global awareness and global concern.

Some of the findings are a bit puzzling and suggest a need for replication and for further research. Why does visiting another country and the number of years enrolled in social studies predict the cognitive but not the attitudinal variable? Why is Western European Studies the only course on a world area which is associated with higher knowledge scores? Why do students who have taken several years of foreign language have higher levels of global concern? It is intriguing to speculate why the acquisition of ability in

speaking another language contributes to global concern. Is it perhaps the case that language study helps the students realize that his or her perspective is not universally shared -- what one might call metalinguistic awareness.

Although this survey provides strong evidence that global education does work, its interpretation also suggests that simply creating a course and calling it International Relations or World Studies will not insure the desired outcome. Research and evaluation in this field would be greatly strengthened by the creation of a typology of different approaches to global education and the construction of different measures tailored to assess the effectiveness of these different types of programs. Although there might be some common elements in the measures (for example, a measure of global perspective), one would also want to be certain to assess the mastery of the specific content, be it world geography, Asian culture, or international politics (to name only three of a long list of possibilities). It is also unlikely that a survey multiple-choice instrument alone could provide enough in-depth information about a program. Essay questions scored for content, teacher interviews, and classroom observations would be necessary parts of an adequate evaluation. Thus this paper concludes with cautious optimism about the success of global education and with a plea to conceptualize the area more carefully and to design multi-method evaluations tailored to the objectives of different conceptualizations.

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